

WHAT IS CLAIMED IS:

1. An apparatus for closing a septal defect, comprising:
an elongate needle comprising a first end defining a tissue-
penetrating tip, and a second end defining a substantially blunt

5 tip;

a filament extending from an intermediate portion of the
needle between the first and second ends; and

a locking element securable to the filament, thereby
preventing the locking element from moving along the filament

10 away from the needle.

2. The apparatus of claim 1, wherein the needle has a
tapered cross-section such that the second end is substantially
larger than the first end.

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3. The apparatus of claim 1, wherein the needle comprises
a slot therein extending from the intermediate portion to the
second end, the slot having a size for receiving a portion of the
filament therein.

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4. The apparatus of claim 1, wherein the filament is
pivotally coupled to the intermediate portion of the needle.

5. The apparatus of claim 1, wherein the intermediate portion of the needle comprises a hole through which the filament is substantially secured to the needle.

5 6. The apparatus of claim 1, wherein the locking element comprises a clip slidable along the filament towards the needle, the clip comprising engaging elements for preventing the clip from being moved along the filament away from the needle.

10 7. The apparatus of claim 1, further comprising:
a tubular member comprising proximal and distal ends and a lumen therebetween, the distal end having a size for insertion into a blood vessel, the needle being carried within the lumen such that the first end is disposed distally to the second end;

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a pusher member slidably disposed within the lumen, the pusher member comprising a distal end disposed proximate the second end of the needle, the pusher member being movable axially relative to the tubular member for ejecting the needle distally
20 from the lumen.

8. The apparatus of claim 7, wherein the pusher member comprises a lumen extending proximally from the distal end of the

pusher member, and wherein the filament is received through the lumen.

9. The apparatus of claim 8, further comprising an actuator on the proximal end of the tubular member for advancing the pusher member relative to the tubular member such that the distal end of the pusher member extends a predetermined distance beyond the distal end of the tubular member.

10. The apparatus of claim 9, wherein the second end of the needle has a cross-section that is substantially larger than a cross-section of the distal end of the pusher member.

11. The apparatus of claim 10, wherein the second end of the needle comprises a flared outer edge such that the second end extends laterally from the distal end of the pusher member.

12. The apparatus of claim 9, wherein the actuator is coupled to the filament for pulling the filament proximally after the pusher member is advanced the predetermined distance.

13. The apparatus of claim 12, wherein the second end of the needle comprises a rounded edge for facilitating pivoting of

the needle about the intermediate region when the filament is pulled proximally.

14. The apparatus of claim 1, further comprising a carrier
5 member having a proximal end and a distal end having a size for introduction into a body lumen, and wherein the locking element is releasably carried by the distal end of the carrier member.

15. The apparatus of claim 14, wherein the locking element
10 comprises opposing arms defining a space therebetween for receiving the filament therein, and wherein the carrier member comprises a hammer arrangement for plastically deforming at least one of the opposing arms to frictionally engage the filament.

15 16. The apparatus of claim 1, further comprising an imaging device comprising a imaging element associated with the distal end of the tubular member for imaging beyond the distal end of the tubular member.

20 17. The apparatus of claim 16, wherein the imaging device comprises an endoscope received within a lumen of the tubular member.

18. The apparatus of claim 16, wherein the imaging device comprises an elongate member comprising a distal end having a size for introduction into a body lumen.

5 19. An apparatus for closing a septal defect, comprising:
an elongate needle comprising a first end defining a tissue-penetrating tip, a second end defining a substantially blunt tip, and a longitudinal axis extending between the first and second ends; and

10 a filament extending from an intermediate portion of the needle between the first and second ends, at least a segment of the filament being biased towards a configuration defining a plane extending generally parallel to the longitudinal axis, the filament being resiliently extendable towards a generally linear
15 configuration.

20 20. The apparatus of claim 19, wherein the needle has a tapered cross-section such that the second end is substantially larger than the first end.

21. The apparatus of claim 19, wherein the needle comprises a slot therein extending from the intermediate portion to the second end, the slot having a size for receiving a portion of the filament therein.

22. The apparatus of claim 19, wherein the filament comprises first and second segments, the first segment attached to the intermediate portion of the needle and biased to extend transversely with respect to the longitudinal axis, the second segment extending from the first segment and being biased to extend transversely to the first segment such that the second segment defines the plane.

23. The apparatus of claim 22, wherein the second segment is biased towards a coiled configuration, the coiled configuration lying substantially within the plane.

24. The apparatus of claim 22, wherein the second segment is biased towards a planar configuration lying substantially within the plane.

25. The apparatus of claim 24, wherein the planar configuration comprises at least one of an "L," a "U," a "Y," and an "S" shape that lies substantially within the plane.

26. The apparatus of claim 19, further comprising:
a tubular member comprising proximal and distal ends and a lumen therebetween, the distal end having a size for insertion

into a blood vessel, the needle being carried within the lumen such that the first end is disposed distally to the second end; and

a pusher member slidably disposed within the lumen, the pusher member comprising a distal end disposed proximate the second end of the needle, the pusher member being movable axially relative to the tubular member for ejecting the needle distally from the lumen.

27. The apparatus of claim 26, wherein the pusher member comprises a gripping mechanism for releasably securing a loose end of the filament, thereby restraining the filament in the generally linear configuration.

28. The apparatus of claim 27, further comprising an actuator on the proximal end of the pusher member for releasing the loose end of the filament, whereupon the filament becomes biased to assume the planar configuration.

29. The apparatus of claim 26, further comprising an imaging element associated with the distal end of the tubular member for imaging beyond the distal end of the tubular member.